NON-PUBLIC?: N
ACCESSION #: 9202240120
LICENSEE EVENT REPORT (LER)

FACILITY NAME: NORTH ANNA POWER STATION UNIT 2 PAGE: 1 OF 3

DOCKET NUMBER: 05000339

TITLE: REACTOR TRIP CAUSED BY MFRV UPON FAILURE OF DRIVER CARD
EVENT DATE: 01/29/92 LER #: 92-001-00 REPORT DATE: 02/12/92

OTHER FACILITIES INVOLVED: DOCKET NO: 05000

OPERATING MODE: 1 POWER LEVEL: 089

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION:
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: G.E. Kane, Station Manager TELEPHONE: (703) 894-2101

COMPONENT FAILURE DESCRIPTION:
CAUSE: X SYSTEM: SJ COMPONENT: FCV MANUFACTURER: C635
REPORTABLE NPRDS: Y

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT:

On January 29, 1992, at 0325 hours, with Unit 2 at 89 percent power, the "C" Main Feed Regulating Valve (MFRV) closed due to a driver card failure causing a reactor trip. The initiating signal for the reactor trip was "C" Steam Generator low level coincident with a steam flow greater than feedwater flow mismatch. This event is reportable pursuant to 10 CFR 50.73 (a) (2) (iv), and a four hour report was made pursuant to 10 CFR 50.72 (b) (2) (ii).

The "C" MFRV closure and subsequent reactor trip was caused by failure of the control system driver card.

No significant safety consequences resulted from this event because all safety systems responded appropriately. Therefore, the health and safety of the public was not affected at any time during this event.

END OF ABSTRACT

1.0 Description of the Event

On January 29, 1992, at 0325 hours, with Unit 2 at 89 percent power (mode 1), due to end of cycle power coastdown, the "C" Main Feedwater Regulating Valve (EIIS System Identifier SJ, Component Identifier FCV) closed due to a control system driver PC card failure causing a reactor trip. The initiating signal for the reactor trip was "C" Steam Generator low level coincident with a steam flow greater than feedwater flow mismatch. This event is reportable pursuant to 10 CFR 50.73 (a) (2) (iv) as an automatic actuation of an Reactor Protection System. A four hour report was made at 0443 hours pursuant to 10 CFR 50.72 (b) (2) (ii).

Control Room Operators responded to the event in accordance with Emergency Procedure E-0, "Reactor Trip or Safety Injection". RCS temperature and pressure decreased to 539 degrees F and 1930 psig before recovering to 547 degrees F and 2235 psig. Plant safety equipment responded appropriately during the reactor trip.

After event investigation and corrective action were completed, Unit 2 was taken to critical on January 29, at 1758 hours.

2.0 Significant Safety Consequences and Implications

No significant safety consequences resulted from this event because all safety systems responded appropriately, and there was no release of radioactive materials. Therefore, the health and safety of the public was not affected at any time during this event.

3.0 Cause of the Event

The cause of the steam flow greater than feed flow reactor trip was a failed power supply on the driver card for the "C" main feedwater regulating valve. When power was lost, the valve failed closed and isolated normal feedwater flow to the "C" steam generator.

4.0 Immediate Corrective Actions

Upon determination that "C" MFRV had closed, the operator attempted to open the valve using the controller on the benchboard. Since the card had failed, the controller would not respond. Control room personnel then responded to the reactor trip in accordance with Emergency Procedure E-0, "Reactor Trip or Safety Injection".

5.0 Additional Corrective Actions

The failed MFRV driver card, as well as the driver cards for the other two MFRVs, were replaced with a new cards and successful functional tests were performed.

6.0 Actions to Prevent Recurrence

An engineering evaluation and root cause investigation is being conducted to discern any contributing factors to the card failure. Further actions to prevent a recurrence will be based upon the results of the evaluation and investigation. These results will be factored into any corrective actions selected for implementation from previous root cause analyses of other driver card failures.

7.0 Similar Events

LER N2-91-009-00 documents a Unit 2 reactor trip from 100 percent power due to a failed driver card on the 'B" MFRV. Results of an engineering and root cause evaluation are being studied at this time to determine the appropriate action for improving the driver card power supply reliability.

LER N1-90-001-00 documents a Unit 1 reactor trip from 100 percent power due to a failed driver card on the "C" MFRV. A root cause evaluation determined that some components on Westinghouse 7300 driver cards should be replaced every five years due to equipment aging. Upon determining that an aging problem existed, all driver cards for the MFRVs on Units 1 & 2 were replaced with refurbished driver cards during the last refueling outages.

LER N1-89-005-00 documents a Unit 1 reactor trip from 76 percent power due to fatigue failure of the Instrument Air supply line to the "C" MFRV.

8.0 Additional Information

Unit 1 was in Cold Shutdown (mode 5) throughout the event and was not affected.

Vepco VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
P.O. BOX 402

MINERAL, VIRGINIA 23117 10 CFR 50.73

February 12, 1992

U. S. Nuclear Regulatory Commission Serial No. N-92-04
Attention: Document Control Desk NAPS:MJB
Washington, D.C. 20555 Docket Nos. 50-339
License Nos. NPF-7

Dear Sirs:

The Virginia Electric and Power Company hereby submits the following Licensee Event Report applicable to North Anna Unit 2.

Report No. 50-339/92-001-00

This Report has been reviewed by the Station Nuclear Safety and Operating Committee and will be forwarded to the Corporate Management Safety Review Committee for its review.

Very Truly Yours,

G. E. Kane
Station Manager

Enclosure:

cc: U.S. Nuclear Regulatory Commission
101 Marietta Street, N.W.
Suite 2900
Atlanta, Georgia 30323

Mr. M. S. Lesser
NRC Senior Resident Inspector
North Anna Power Station

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